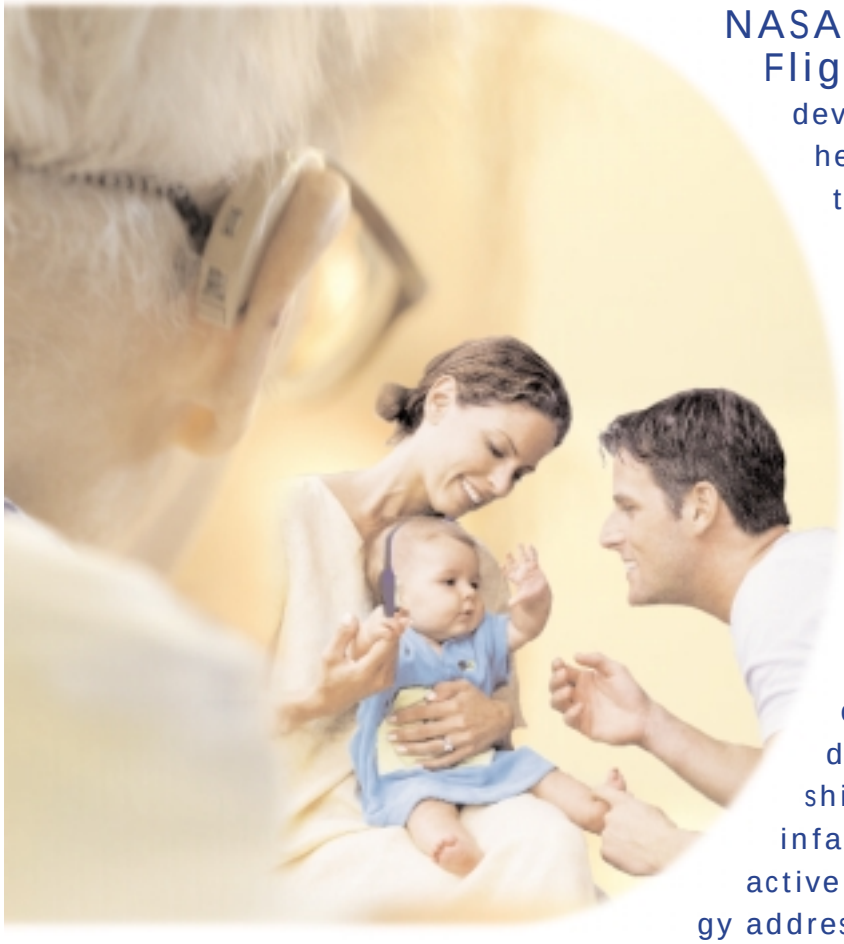
Headset Assembly

for Behind-the-Ear Hearing Aids



NASA's Marshall Space Flight Center (MSFC) has developed and patented a headset that helps eliminate the high-pitched feedback noise associated with behind-the-ear hearing aids. Ninety percent of hearing loss patients cannot be medically treated and must use hearing aids, often the behind-the-ear type. The most common complaint about these hearing aids is the presence of feedback noise. Another common problem is the tendency of the hearing aid to shift, especially when used by infants, energetic children, or active adults. This new technology addressess both complaints.

Benefits

- Eliminates feedback noise by maintaining the position of the hearing aid
- Reduces damage to or loss of the hearing aid via a cord attachment to the headset
- Children and infants quickly adjust to the headband units

Commercial Applications

- Suitable for infants and energetic children fitted with behind-the-ear hearing aids
- Suitable for disabled people who cannot insert or adjust their hearing aids
- Suitable for active adults with hearing loss
- Works in combination with eyeglass hearing aids

National Aeronautics and Space Administration

The Technology

This technology utilizes a headset design in coordination with a pliable material to eliminate annoying feedback attributed to behind-the-ear hearing aids. The headset consists of a compress, a pressure plate, and a headband. The compress is composed of a soft, pliable material sized to cover the ear concha and maintain the position of the molded insert and hearing aid electronics. The compress material is envisioned to consist of a high-density foam or open-celled, visco-elastic plastic such as atactic polystyrene, which molds to the ear cavity and around the electronics. Gauze or other cloth pads could conceivably be used. The pressure plate is a thin disk integral to the headband, which is sufficiently rigid in order to maintain the foam. The headband is a resilient band shaped to fit like music earphones, providing the force necessary to mold and maintain the compress against the ear region.

The headset is specifically designed to maintain the position of the molded insert and electronics comfortably, without impeding sound to the input microphone. The headset incorporates eyelets to which the hearing aid can be attached with a cord, to guard against loss or damage to the hearing aid. Each year, an estimated 600,000 people worldwide are diagnosed with hearing loss, and could benefit from this headset.

Partnership Opportunities

This technology is part of NASA's technology transfer program, which seeks to stimulate commercial use of NASA developed technology. This technology has been patented (Patent #6,445,805) and companies are invited to explore licensing the technology. NASA is flexible in its agreements—opportunities exist for exclusive, nonexclusive, or exclusive field-of-use patent licensing.

For More Information

If you would like more information about this technology or about NASA's technology transfer program, please contact:

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More information about working with MSFC's Technology Transfer Department is available online.

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